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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,176	09/17/2003	John L. White	P214414	8586

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SCHACHT LAW OFFICE, INC.
SUITE 202
2801 MERIDIAN STREET
BELLINGHAM, WA 98225-2412

EXAMINER	
TRUONG, THANH K	
ART UNIT	PAPER NUMBER
3721	
MAIL DATE	DELIVERY MODE
09/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/667,176	WHITE, JOHN L.	
	Examiner	Art Unit	
	THANH K. TRUONG	3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,6,8,9,12,13,18 and 21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,6,8,9,12,13,18 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to applicant's RCE received on August 14, 2008.

2. Applicant's cancellation of claims 2, 3, 5, 7, 10, 11, 14-17, 19 and 20 is acknowledged.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 4, 6, 8, 9, 12, 13, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleishman et al. (4,421,180) in view of Scheid et al. (6,102,133) and Nishimura et al. (3,789,930).

Fleishman et al. discloses an apparatus and a method comprising:

a housing member (21) defining a housing chamber (the space between the housing and the ram member); a ram member (17) supported within the housing chamber for movement relative to the housing member between an upper position and a lower position; and a vent port (33) arranged between the lower and upper positions, where the vent port defines a preload position, and allows ambient air to flow into and out of the housing chamber under predetermined conditions (column 4, lines 9-13);

a helmet member (19, 27) supported by the housing member for movement relative to the housing member between a rest position and an impact position; and

a lifting assembly (65, 67) at least partly disposed within the housing chamber above the ram member, and engages the ram member to lift the ram member from the lower position to the upper position during each cycle; whereby

the lifting assembly

when the lifting system raises the ram member above the preload position, ambient air flows into the housing chamber;

when the ram member falls below the preload position, ambient air within a preload chamber portion of the housing chamber compresses to apply a preload force on the inner portion of the helmet member (figure 5); and

when the ram member moves into the lower position, the ram member impacts the helmet member to force the helmet member from the rest position to the impact position, thereby driving the pile.

As discussed above, Fleishman et al. discloses the claimed invention, but it does not expressly disclose a seal system for sealing the preload chamber portion of the housing chamber.

Scheid et al. discloses that:

> *"There are other prior art pile hammers, wherein a hammering piston is lifted by means-of a hydraulic actuator arranged outside of a guiding cylinder, the hammering piston thereafter being allowed to fall freely onto the hammering member. Such softly operating pile hammers are used particularly, where piles and the like must be hammered into soft soil or where production of heavy noise as produced by Diesel type pile hammers cannot be tolerated."* (emphases added) (Scheid et al. – column 1, lines 19-26).

Scheid et al. discloses a seal system for sealing the preload chamber portion of the housing chamber when the ram member is below the preload position (figure 1 of

Scheid et al. shows ram 26 and helmet member 12 have seal members at their distal ends). Scheid et al. sealing system provides an airtight chamber within the housing below the sealing system of the ram. In column 7, lines 17-20 Scheid et al. discloses:

> *"Upon further upward movement the hammering piston 26 will take in fresh air through the working slot 36, and upon the hammering piston falling down the air contained in the cylinder* ***will be compressed*** *once the hammering piston 26 has moved past the working slot 36 in downward direction"* (emphasis added); and

Nishimura et al. disclose that:

> *"In studying the mechanics of noise generation in conventional diesel pile hammers, it has been found that a substantial part of the noises heretofore generated by such devices is due to the direct contact of the rams thereof with their anvils, as in striking a blow."* (emphases added) *(Nishimura et al. – column 1, lines 33-37).*

One in the art would recognize that in order to reduce the noise, one would be required reduce the mechanical impact between the ram and the anvil, and furthermore, the compressed air in an airtight chamber would soften the impact between the ram and the anvil.

Therefore, it would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have modified Fleishman et al. by incorporating the seal system as taught by Scheid et al. to provide an airtight chamber within the housing below the sealing system of the ram. This modification would reduce the impact between the ram and the anvil and thus also would reduce the noise generated by the apparatus as suggested by Nishimura et al. as mentioned above.

The modified Fleishman et al. by Scheid et al. further discloses: air is prevented from flowing through the vent port when the ram member is below the preload position

(Scheil et al. - column 7, lines 17-20); and the ram member defines a ram side wall; the housing member defines a housing interior wall; the seal system comprises a ram seal for inhibiting fluid flow between the ram side wall and the housing interior wall; the pile is being secured by the drop hammer by clamp (25) in order for the pile to be driven into the ground; and the ram member moves from the lower position to the upper position and back to the lower position to define an operating cycle; the lifting assembly engages and lifts the ram member from the lower position to the upper position once during each operating cycle.

Furthermore, The modified Fleishman et al. by Scheid et al. additionally discloses: the ram member (26) with seal members at both ends of the ram, and the helmet member (12, 14) also has seal member at its top portion (14) – (see Fig. 1 of Scheid et al.).

Response to Arguments

5. Applicant's arguments filed August 14, 2008 have been fully considered but they are not persuasive.

6. In response to the Applicant's argument that: *"the Applicant respectfully submits that the Examiner has combined references that belong to non-analogous art."*, this is not found persuasive for the following reason:

It has been held that the determination that a reference is from a nonanalogous art is twofold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably

pertinent to the particular problem with which the inventor was involved. *In re Wood*, 202 USPQ 171, 174.

In this case, as discussed above (paragraph 4), Fleishman et al. discloses the drop hammer but is silent about the seal system for sealing the preload chamber portion of the housing chamber. Scheid et al. teaches the use of seals on the ram member and the helmet member to produce a compressed chamber defined by the housing, the ram member and the helmet member. Scheid et al. also suggests that the compressed chamber will provide a softly operating hammers and in turn reduce noise, and Nishimura et al. teaches that noises can be reduced simply by softening the impact between the ram and the helmet members.

Accordingly, Fleishman et al. modified by Scheid et al. would have provided a compressed chamber within the housing and in turn reduced noises in operation of the drop hammer. Furthermore, it would have been obvious to combine the references, since it has been held that applying a known technique to a known device would have yield predictable results to one of ordinary skill in the art at the time of the invention (*KSR*).

Finally, it has seen held that: the test for obviousness is not whether the features of one reference may be bodily incorporated into the other to produce the claimed subject matter but simply what the combination of references makes obvious to one of ordinary skill in the pertinent art. *In re Bozek*, 163 USPQ 545 (CCPA 1969).

7. In response to the Applicant's argument that: *"The Applicant respectfully submits that the cited references, taken alone or in combination, fail to disclose this arrangement of seals and vent port."*, this is not found persuasive for the following reason:

As discussed above (paragraph 4), Fleishman et al. discloses: housing member (21) that has vent port (33). Scheid et al. discloses the vent port (36), the ram member (26) and helmet member (12) both have seal members at their distal ends – see Fig. 1 of Scheid et al. (one skill in the art would recognize that without seal members, there would not be a compressed chamber).

8. In response to the Applicant's argument that: *"the Applicant respectfully submits that noise reduction is not a goal of the present invention."*, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 601 (CCPA 1915). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 110 USPQ 209 (CCVA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, 163 USPQ 545 (CCPA. 1969).

In this case, Fleishman et al. discloses the drop hammer but is silent about the seal system for sealing the preload chamber portion of the housing chamber. Scheid et al. teaches the use of seals on the ram member and the helmet member to produce a

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Finally, it has seen held that: the test for obviousness is not whether the features of one reference may be bodily incorporated into the other to produce the claimed subject matter but simply what the combination of references makes obvious to one of ordinary skill in the pertinent art. *In re Bozek*, 163 USPQ 545 (CCPA 1969).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to THANH K. TRUONG whose telephone number is (571)272-4472. The examiner can normally be reached on Mon-Fri 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

tkt
September 10, 2008.

/Thanh K Truong/
Primary Examiner, Art Unit 3721.